

#### REMARKS

Claims 13-24 stand rejected under 35 USC 112, second paragraph. Claims 13-24 have been replaced with new claims 25-43, and it is believed that the new claims are not open to rejection under 35 USC 112, second paragraph.

With regard to the examiner's specific objection to claim 13, lines 6-7, applicant notes that casting refers to pouring into a mold and does not necessarily imply that the cast alloy is solid.

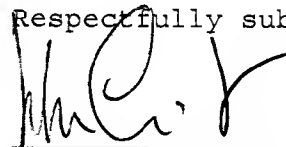
Claims 13 and 15-24 stand rejected under 35 USC 103 over Mogylmvy et al or Schlagel et al in view of the ASM Handbook. Claim 14 has not been rejected over the prior art.

This application, as now amended, contains three independent claims, namely claims 25, 40 and 42. Claim 25 is directed to a method for producing magnetically active shape memory metal alloy containing nickel, manganese and gallium. In accordance with claim 25, two of the three elements are melted to form a master alloy, which is cooled and crushed and then melted with the third element to form a nickel-manganese-gallium alloy. The melt is homogenized and the resulting alloy is cast and subjected to directional solidification at 10-100° C below the liquidus temperature of the nickel-manganese-gallium alloy. In this manner, the master alloy is used to form the desired nickel-manganese-gallium alloy by adding a precisely controlled amount of the third element to the master alloy to achieve a nickel-manganese-gallium alloy of the desired composition.

Applicant submits that neither Mogylmvy et al nor Schlagel et al discloses or suggests adjusting the composition of a master alloy in this manner to form a nickel-manganese-gallium alloy of a desired composition. Since the examiner relies on the ASM Handbook only with respect to the step of directional solidification, applicant submits that the subject matter of claim 25 is patentable. It follows that the dependent claims 26-39 also are patentable.

Claims 40 and 42 are narrower in scope than claim 25 and are patentable for the reasons presented in support of claim 25.

Respectfully submitted,



---

John Smith-Hill  
Reg. No. 27,730

SMITH-HILL & BEDELL, P.C.  
16100 N.W. Cornell Road, Suite 220  
Beaverton, Oregon 97006

Tel. (503) 574-3100  
Fax (503) 574-3197  
Docket: OUTT 3399